polar zones. The night is the winter of the tropics, recurring with very little difference throughout the year.

It is evident from these two papers that, though there is but little change from one day to the next in much of the Tropics, the changes from one period to another may be appreciable.—*R. A. M.*

THE PROBABLE EFFECT OF CLIMATE OF RUSSIAN FAR EAST ON HUMAN LIFE AND ACTIVITY.

By S. NOVAKOVSKY.

[Author's summary reprinted from *Ecology*, July, 1922, 3:181–201, 2 maps, tables.]

The climate of the Russian Far East affects all branches of the economic life and activity of the population. If we divide the Russian Far East into separate economic regions, it will be seen that they fully coincide with the climatic provinces and determine not only the present economic conditions, but the future possibilities as well.

Fishing is one of the principal occupations in the northeastern part of the Russian Far East. The climate influences this activity, not only affecting the catch, but the drying of the fish. The climate factors are dampness, large number of cloudy days, fogs, long winter, freezing of the harbors, strong winds.

Cattle and animal breeding.—In the region of the Chukchi, reindeer breeding is the chief occupation. Among the unfavorable effects of climate are severe and snowy winters and very hot summers. Cattle breeding in the Amur Province is hampered by the following climatic conditions: Heavy summer rains and lack of sunshine, with consequent dearth of nourishing herbs. In the Maritime Provinces mild climate and oceanic winds, the latter driving away mosquitoes, are among the favorable climatic conditions.

Hunting.—Among the indirect climatic influences the character of vegetation which is determined by climate must be marked. The direct influences are species of animals and quality of furs, severity of climate, formation of ice crust, sleet, storms, etc., affecting the migration of animals.

Agriculture.—In the Okhotsk, Kamchatka, Chukotsk regions sharp oscillations of temperature, humidity, fogs, etc., preclude the possibility of agriculture. In the Ussuri and Amur Provinces, where climate is milder, agriculture is considerably developed, permitting even the cultivation of rice.

Customs, houses, and food, especially the latter, are affected by climate. In agricultural regions bread is the chief food; fish and meat, on the other hand, constitute the chief food where fishing and hunting predominate. Among the Chukchi reindeer constitute almost the only food.

The effect of climate upon religious beliefs is seen from the worship of rocks, trees, mountains, elements of wind, rain, thunder, etc.

Health.—The long and severely cold winter which is common over the largest part of the Russian Far East is most trying upon the population. The healthiest region is Ussuri. Okhotsk is the least healthful because of the excess of cloudiness and winds. In the northern parts of the Russian Far East the prolonged darkness, as well as the low temperature, are trying, and in summer fogs and exceeding cloudiness along the coast depress and affect the population. The hot days decrease the appetite and affect the digestive system. Hot and humid climate tends to the development of microorganisms.

Diseases.—Lung diseases are especially common throughout the Russian Far East and occur especially in winter. In the Amur and Maritime Provinces diseases of the stomach, as a result of unripe food, also of the difference between the temperature of the day and night, are common. An indirect climatic cause of diseases is food, as, for example, badly salted animal fat, which causes internal catarrh. In the eastern parts of the Russian Far East humidity accounts for rheumatism. Diseases of eyes, often resulting in total blindness, are very frequent in the north and northeast, and are due to the dazzling cover of snow and to smoke indoors. In the Okhotsk-Kamchatka region psychic and nervous disorders are prominent and occur as a result of the long monotonous winter and absence of bright sunny days.

BIBLIOGRAPHY OF METEOROLOGICAL LITERATURE.

The Royal Meteorological Society has just published a "Bibliography of meteorological literature, No. 1 (32 pp., 9¾ by 6)," covering meteorological literature received from September, 1920, to June, 1921. It was compiled from the bibliography printed quarterly in the journal of the Society, and is arranged in the same way, according to the major divisions of the International Catalogue of Scientific Literature. Each item is numbered, however. In the case of books, a valuable feature is the notation concerning reviews published. Copies may be had at 2 shillings and sixpence from the Society, at 49 Cromwell Road, South Kensington, London, S. W. 7, England.

BIBLIOGRAPHY.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Meteorologist in Charge of Library.

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

Aldrich, L. B.
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